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PREVALENCE OF RISK FACTORS CAUSING POLYCYSTIC OVARIAN SYNDROME IN WOMEN LIVING IN THE RURAL AREA OF PAKISTAN

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ABSTRACT

Background: Polycystic Ovarian Syndrome is a condition in women of irregular or no menstrual periods, acne, obesity, and excess hair growth. Polycystic Ovarian Syndrome is one of the most common endocrine disorders, affecting approximately 5-10% of women worldwide, with less than 50% of them undiagnosed. There are multiple common factors of PCOS such as genetics, in-utero changes, stress, and insulin resistance, trouble with weight, sleep apnea, and hormonal birth control pills. **Objectives:** The objective of the research was to study the prevalence of risk factors causing Polycystic Ovarian Syndrome in women presenting in Gynae OPD of DHQ, Mirpur AJK, and to know about their awareness about PCOS. **Methodology:** The study was conducted in Gynea OPD of DHQ, Mirpur AJK, and a cross-sectional study design was used. In the current study, we used a convenient sampling technique that fulfills the required criteria of research, and the sample size was 100. Research data were collected by making a questionnaire after concerning with doctors. We used inclusion and exclusion criteria for the participation of women in our research work. For statistical analysis, we used SPSS software. **Results:** PCOS is observed in females of age 22_30yrs with an equal ratio between married and unmarried. These are mostly students having the age of menarche 12_14 years with the irregular menstrual cycle, moderate flow, mild pain, and duration of 3_5 days. Females taking junk food, increase weight, and facing stress also have a history of PCOS. It is also most commonly observed in those who use contraceptives, having problems in conceiving, and are nulliparous. **Conclusion:** PCOS is prevalent in students of age group between 22_30 years. Major risk factors are increased weight, irregular menstrual cycle, contraceptive use, those facing any stress, and eating junk food.

KEYWORDS: PCOS, Gynae OPD, Prevalence, Questionnaire, SPSS, Risk factors.

MATERIALS AND METHODS

Study design
A descriptive cross-sectional study was done.

Settings
DHQ hospital Mirpur AJK.

Sample Size
A sample of 100 patients has been taken for study.

Sampling Technique
In the current study, a convenient sampling technique was used that will fulfill the required criteria for research.

Data collection technique
A questionnaire was used as a tool for data collection.

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Inclusion Criteria
Non-pregnant women who have attained their age of menarche two years before and are willing to participate in the study will be enrolled in the study.

Exclusion Criteria
Those women who were known cases of thyroid disorders, Cushing's syndrome, pregnant women, and

who are not willing to participate will be excluded from this study.

INTRODUCTION

One of the most common endocrine disorders in women is polycystic ovary syndrome (PCOS). Depending on which criteria are used to define PCOS, the prevalence in the community is reported to be between 6–10 percent.[1] Based on ultrasounds, PCOS is defined by ovulatory dysfunction, hyperandrogenism, and polycystic ovarian morphology (PCOM).[2] Despite the high prevalence of this condition, there is debate about the best diagnostic criteria and treatment options for adolescents. In both adults and adolescents, hyperandrogenism is the most consistent symptom of PCOS.[3,4] Adult PCOS patients frequently present with pathognomonic symptoms during adolescence. There is value in detecting PCOS early to manage the associated long-term metabolic and reproductive health consequences optimally.[5]

When this chronic condition is diagnosed in young women, treatment should be individualized and take into account the nuances of the condition. Clinical hyperandrogenism in the form of hirsutism, acne, or alopecia is a clinical feature of PCOS. Primary or secondary amenorrhea, oligomenorrhea, irregular periods, and heavy menstrual bleeding are all examples of menstrual irregularity. Clinical tests reveal polycystic ovarian morphology (PCOM) on ultrasound and/or metabolic derangement (insulin resistance, glucose intolerance, obesity, and dyslipidemia) on blood testing. Its clinical presentation can be markedly diverse.[6]

PCOS has a complex relationship with genetic, metabolic, endocrine, environmental, and lifestyle factors, and the etiology is still unknown.[7-9] Disordered neuroendocrine gonadotropin secretion, hyperandrogenism, insulin resistance, or a combination of these are established theories.[10]

PCOS in adolescence has been described as an independent risk factor for disease by clinically significant metabolic and psychological sequelae.[11,12] Insulin resistance and hyperinsulinism are also common in PCOS.[26,13] as is hyperlipaemia, and obesity adds to the risk.[14]

As a result, as part of routine clinical care, patients should be screened for the presence of co-morbidities. Although these data do not focus on an adolescent population, depression and anxiety symptoms are more common in PCOS women compared to BMI-matched subjects.[15,16] It is unclear whether these changes are related to clinical symptoms such as acne, hirsutism, increased BMI, and infertility.[2] or to the chronic nature of PCOS.[17]

RESULT AND DISCUSSION

Current research has been conducted on the prevalence of risk factors causing PCOS in women. It was conducted in the gynecology department of DHQ Mirpur. A total of 100 patients participated in this research.

According to our research among these participants 45 % are students while the remaining are either housewives or working women. 55% of females are from 15-30 years of age and 45% belong to the 31-45 age group. 19% of women have the age of menarche less than 12, 71% have 12-14 years of age, and 9% have greater than 14 years. Out of 100% patients,81% have an irregular cycle, 46% of them have moderate menstrual flow, 47% of them have a duration of menstruation 3-5days,37% of them have pain of mild intensity during menstruation. Among married 75% have never used any contraceptives, and 41% of them have problems in conceiving. Among married 66% are nulliparous, 15% have C-section, 11% have a normal vaginal delivery and 8% have episiotomy.75% have not experienced any complications during pregnancy.

54% of women do not know about PCOS before and 60% were diagnosed by ultrasonography. About 27% 0f them have a family history of PCOS and 4% have a family history of endometrial cancers.

According to our study 46%, women have excessive hair growth, 15% have acne problems and 33 % have both of them.83% of women under study were overweight, with 52% taking junk food once a week. Wang and colleagues analyzed data from 23 trials, including 941 women or adolescent girls diagnosed with PCOS who are overweight or obese.[18] 68% of these participants were suffering from stress. The study also identified that 21% of patients are hypertensive,8% are diabetics and 6% have hypercholesterolemia. Out of 100%; 23% had UTI and 19% had vaginal infections during the past 6 months.

PCOS had no statistically significant relationship with women's age, marital status, family history, or contraceptive use. Menstrual cycle irregularity, the presence of excessive hair growth, stress, obesity, and hypertension were the factors that showed a statistically significant association.

These studies were in confirmation with some of the studies published on the subject in past. In the study by Zandi.Set al about 54% of women with PCOS complain of excessive hair growth and 37% of them suffered from menstrual disturbances.[19] Falsetti, L et al have demonstrated a strong association between acne, excessive hair growth, and various hormonal disturbance among women with PCOS.[20]

Hence, the presence of obesity, menstrual irregularities, and excessive hair growth should raise a strong suspicion toward the presence of underlying PCOS among women.

These women shall subject to appropriate diagnostic evaluation to diagnose PCOS in time and treat them effectively to prevent long-term physical and psychological consequences of this systemic endocrine dysfunction.

CONCLUSION

According to our study, it is concluded that obesity 83%, stress 68%, fast food and diet habits 52%, hypertension 21%, family history 27% are found to be risk factors for the development of PCOS. The risk of PCOS increases with the presence of one or more identified risk factors. Most of the factors tested in our study are interlinked to each other and are mostly modifiable. Hence careful monitoring and proper management of identified risk factors not only delays but also helpful inadequate management of the disease.

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